18. Explain the theory and working of water heater and induction heater.

19. Draw the diagrams of CFL and LED light and explain its working.

20. Discuss the principle and construction of DC and AC motors.

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APRIL/MAY 2024

23USEL23 — HOME APPLIANCES

Time : Three hours Maximum : 75 marks

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define direct current (DC).

2. What is an electrical insulator?

3. What are the connections available in electrical wiring?

4. What do you mean by earthing?

5. What is the principle of heating rod?

6. Define electrical induction.

7. What is an illumination?

8. Define LED.

9. How do you differentiate AC and DC motors?

10. What are the different methods of electrical testing?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) What are the differences between direct current and alternating current?

Or

(b) Explain the principle and construction of transformer.

12. (a) Discuss the prevention measures of electrical shock.

Or

(b) Write the application of MCB and ELCB.

13. (a) Describe about electrical iron box and its working.

Or

(b) Explain the working of microwave oven.

14. (a) Write a note on electrical bulbs.

Or

(b) Explain the IS codes and IE codes.

15. (a) Describe the working of electric fan.

Or

(b) Explain the theory and working of wet grinder.

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SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write short notes on the following :

(a) Voltage

(b) Capacitance

(c) Inductance

(d) Electrical conductor

17. Give the detailed account on single phase and three phase connections.